UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/740,809 | 12/21/2000 | Hideki Etori | | 6576 |

30132 7590 10/25/2002

GEORGE A. LOUD
3137 MOUNT VERNON AVENUE
ALEXANDRIA, VA 22305

| EXAMINER | |
|---|---|
| CRUZ, MAGDA | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2851 | |

DATE MAILED: 10/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 09/740,809 | Applicant(s) ETORI ET AL. | |
|---|---|---|---|
| | Examiner Magda Cruz | Art Unit 2851 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *16 August 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters; prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,4-7,10 and 12-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-7,10 and 12-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *16 August 2002* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Drawings*

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 08/16/2002 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 1, 4, 7, 10, 12-16 and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe, et al.

Watanabe, et al. (US Patent Number 6,262,840 B1) discloses a see-through light transmitting type screen (Figure 15) comprising a light scattering layer (11, 41) having a front-scattering property; wherein the light scattering layer (11, 41) consists of a transparent binder (26) containing spherical microparticles (12); further comprising an

anti-reflection layer (28) provided on at least one side of the light scattering layer (Figure 24); wherein the transparent binder is glass or high molecular resin (column 13, lines 23-31). The transparent layer has a refraction index (n) lower than that of the transparent binder of the light scattering layer (column 15, lines 2-6). The transparent layer has a refraction index higher than that of the transparent binder of the light scattering layer (column 14, lines 16-20). The spherical microparticles have a mean particle diameter of 1 μm – 10.0 μm (column 11, lines 44-45). Said microparticles (12) do not protrude from the light-scattering layer (see Figure 15). An anti-reflection layer (28) is provided on at least one side of the light scattering layer (column 10, lines 59-60).

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 5 and 17 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Watanabe, et al.

Watanabe, et al. (US Patent Number 6,262,840 B1) teaches the salient features of the present invention, including the spherical microparticles having a mean particle diameter of 1.0 μm - 10.0 μm (column 11, lines 51-56), and a refraction index relative to that of the transparent binder (column 12, lines 15-21). Furthermore, Watanabe, et al.

explains how it's possible to obtain a desired diffusion angle by selecting refractive indexes of the respective parts and members of the screen. Watanabe, et al. inherently discloses that the refraction index relative to that of the transparent binder n satisfy the relation $0.91 < n < 1.09$ ($n \neq 1$).

Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention was made, to utilize a transparent binder, which satisfies the relation $0.91 < n < 1.09$ ($n \neq 1$), for the purpose of having a light converging effect determined in response to a value of the refractive index.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, et al. in view of Iwata, et al.

Watanabe, et al. (US Patent Number 6,262,840 B1) teaches the salient features of the present invention, except a screen having a haze of 3.0% or more and distinctness of image of 60.0% or more.

Iwata, et al. (US Patent Number 6,327,088 B1) discloses haze and distinctness values (column 3, lines 24-28; Table 5).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the haze and distinctness values disclosed by Iwata, et al. in Watanabe, et al.'s invention, for the purpose of preventing the occurrence of the reflection rays out of incident rays coming from outside.

explains how it's possible to obtain a desired diffusion angle by selecting refractive indexes of the respective parts and members of the screen. Watanabe, et al. inherently discloses that the refraction index relative to that of the transparent binder n satisfy the relation $0.91 < n < 1.09$ ($n \neq 1$).

Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention was made, to utilize a transparent binder, which satisfies the relation $0.91 < n < 1.09$ ($n \neq 1$), for the purpose of having a light converging effect determined in response to a value of the refractive index.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, et al. in view of Iwata, et al.

Watanabe, et al. (US Patent Number 6,262,840 B1) teaches the salient features of the present invention, except a screen having a haze of 3.0% or more and distinctness of image of 60.0% or more.

Iwata, et al. (US Patent Number 6,327,088 B1) discloses haze and distinctness values (column 3, lines 24-28; Table 5).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the haze and distinctness values disclosed by Iwata, et al. in Watanabe, et al.'s invention, for the purpose of preventing the occurrence of the reflection rays out of incident rays coming from outside.

***Response to Arguments***

7. Applicant's arguments filed 08/16/2002 have been fully considered but they are not persuasive.

The applicant has argued that the prior art does not teach a "front scattering layer", the "mean particle diameter" and the "refraction index ratio". However, Watanabe, et al. (US Patent Number 6,262,840 B1) teaches such "front scattering layer" (as shown on Figure 15, elements 11 and 41), the "mean particle diameter" (column 11, lines 44-45) and the "refraction index ratio" (column 14, lines 54-65 and column 16, lines 20-30). Furthermore, there is no protrusion of the balls (12) from the screen surface (10S); also, there is no impair of the see-through property. This is taught in column 11, lines 22-27.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

RUSSELL ADAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800